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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/324,253	06/02/1999	JERRY C. CHEN	0050.1610-000	1283

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EXAMINER

PAYNE, DAVID C

ART UNIT PAPER NUMBER

2633

DATE MAILED: 03/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/324,253

Applicant(s)

CHEN, JERRY C.

Examiner

David C. Payne

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-32 and 34 is/are rejected.
- 7) ☒ Claim(s) 15 and 33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11. 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1, 16, 28, 31, 34 are rejected under 35 U.S.C. 102(e) as being anticipated by *Thompson et al. US6282005 B1 (Thompson)*.

Re claims 1 and 16, Thompson disclosed,

An optical device comprising: (figure 4)

a frequency dependent disperser (#152) that disperses an input optical signal to form a dispersed signal having a plurality of frequencies;

a frequency selective modulator (#160, #162, #163, e.g., col./line: 4/5-12) that modulates at least one of the plurality of frequencies; and

a frequency dependent combiner (#166) that combines the frequencies in the dispersed signal to form an intensity modulated output signal. (e.g., col./line: 10/1-5)

Thompson does not describe the device as an optical frequency filter but does disclose filtering (e.g., col./line: 11/5-10)

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The preamble of the claim 1, 16, 28, 31, 34 respectively, “an optical frequency filter”, “frequency modulation (FM) to intensity modulation (IM) converter”, “method of convert FM signals to IM signals”, “method of filtering”, “method to shape transmission” has not been given patentable weight because clause found in the preamble of an apparatus claim is not afforded the effect of a distinguishing limitation unless the body of the claim sets forth structure which refers back to, is defined by, or otherwise draws life and breadth from the preamble. See *In re Casey*, 152 USPQ 235 (CCPA 1967); *Kropa V. Robie*, 88 USPQ 478 (CCPA 1951). Thus a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. See *Kropa V. Robie*, supra at 480. See also *EX parte Mott*, 190 USPQ 311, 313, (PTO BD of App. 1975).

Re claim 2

Thompson disclosed a device which separates out wavelengths where each modulator is “wavelength sensitive” (varying function) (e.g., col./line: 4/8-12)

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 4, 17, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Thompson et al. US6282005 B1 (Thompson)*.

Thompson does not disclose that the light is transmitted in a monotonically varying function.

Thompson disclosed a device which operates in a linear function (e.g., col./line: 16/20-50, 7/39-

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41).

It would have been obvious to one of ordinary skill in the art at the time of invention that the light with varies as taught my Thompson is a monotonic function. One is motivated as such since linear functions are monotonically varying functions.

6. Claims 6, 7 – 11, 13, 14, 18-26, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Thompson et al. US6282005 B1 (Thompson)* in view of *Kurokawa et al. US6,122,419 (Kurokawa)*.

Re claims 6, 7 and 14, Thompson did not disclose time delays in the disperser and a AWG.

Kurokawa disclose an AWG where each wavelength experiences different delays (e.g., col./line: 25/10-20). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the Kurokawa AWG (e.g., Fig. 20) with the Thompson device to obtain the claimed invention. One is motivated as such since the use of an AWG and grating allows spectral division of high optical resolution. (e.g., col./line: 20/20-30).

Re claims 8-11, 13, 18-21, 23-26, and 32 the modified invention of Thompson and Kurokawa disclosed gratings (e.g., col./line: 7/20-35).

Re claim 22, Thompson disclose a circulator (figure 20 #102).

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Thompson et al. US6282005 B1 (Thompson)* in view of *Nelson et al. US 3766392 (Nelson)*.

Thompson did not disclose a the use of a prism to disperse wavelengths.

Nelson did disclose a prism and modulator in a configuration as claimed. It would have been

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obvious to one of ordinary skill in the art at the time of invention to combine the prism of Nelson with the design of Thompson to obtain the claimed invention. One is motivated as such

***Response to Arguments***

8. Applicant's arguments with respect to claims 1-34 have been considered but are moot in view of the new ground(s) of rejection.

***Allowable Subject Matter***

9. Claims 15 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

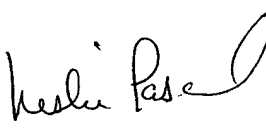
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (703) 306-0004. The examiner can normally be reached on M-F, 7a-4p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

dcp  
February 27, 2003

  
LESLIE PASCAL  
PRIMARY EXAMINER